

RUPTURED GASTROINTESTINAL STROMAL TUMOR IN AN ELDERLY PATIENT PRESENTING WITH PERITONITIS

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Gastrointestinal stromal tumors (GISTs) are rare tumors, with an estimated incidence of 1.5/1,000,000 per year¹. They are the most common mesenchymal tumors of the digestive tract. The most frequent localizations are the stomach (70%) and small intestine (20–30%), followed by the anorectum (7%), colon, and esophagus². Because of their high vascularity, GISTs are frequently associated with gastrointestinal bleeding³. The rupture of these tumors is often associated with hemoperitoneum, according to reported studies^{4–6}. It can be a critical condition if not treated immediately. In this report, we describe a case of a 69-year-old man with a ruptured GIST who presented to our emergency department (ED) without presentation of acute abdomen.

A 69-year-old man with type 2 diabetes mellitus, ischemic heart disease and a history of hypertension was brought to our ED, having had symptoms of abdominal fullness and discomfort for only 1 day. Nausea, vomiting, and loose stool passage were also observed. On physical examination at the ED, the patient was found to be afebrile (temperature, 36.6°C) and lethargic, with blood pressure of 148/90 mmHg, pulse rate of 60/min, and respiratory rate of 19/min. Examination of the abdomen revealed diffused abdominal tenderness with rebound pain, but no muscle guarding. The remainder of the physical examination was unremarkable. The patient himself did not feel much pain until physical examination, and afterwards only had abdominal distension. Laboratory tests showed a white blood cell count of $15.6 \times 10^3/\mu\text{L}$ with 87% neutrophils and 9% band form, a platelet count of $314 \times 10^3/\mu\text{L}$, and hemoglobin of 9.5 g/dL. Serum C-reactive protein was

37.71 mg/dL, and the blood urea nitrogen and creatine were 48 mg/dL and 2.3 mg/dL, respectively. His abdomen plain film showed a dilated, air-filled small and large bowel loop indicating ileus and abundant fecal material collection in the lower abdomen (Figure 1). No subdiaphragmatic free air was seen on a chest X-ray. Abdominal computed tomography showed a homogenous soft tissue density in the left abdomen and several tiny intraperitoneal air densities indicating likely hollow organ perforation as well as ascites (Figure 2).

This patient underwent emergency abdominal laparotomy after urgent surgical consultation. During the operation, 700 mL of turbid ascites in the peritoneal cavity and a 10 × 10 cm jejunal tumor with perforation over 15 cm distal to the Treitz ligament were found. Pathologic examination revealed that the tumor appeared to have arisen from the external muscular layer of the jejunum and was variegated with necrotic areas. The tumor measured 7.5 × 7 × 6 cm, the mitotic rate was



Figure 1. Radiography showing segmental small and large, dilated, air-filled bowel loops.



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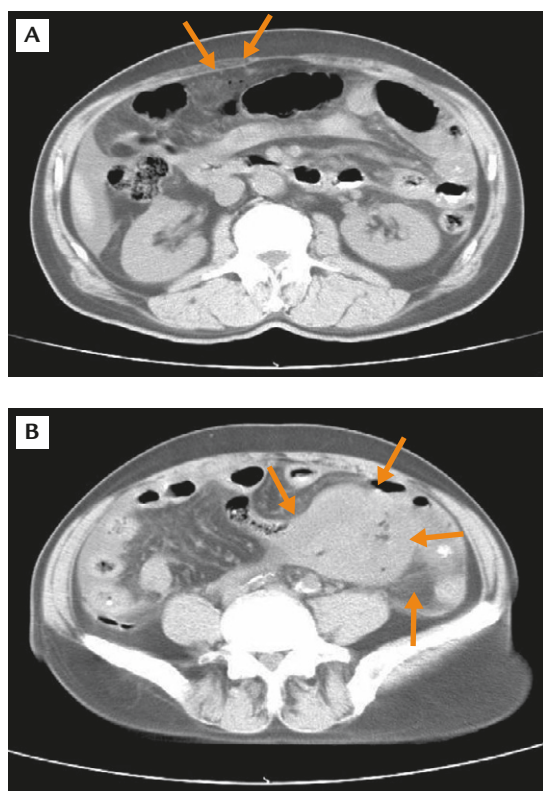


Figure 2. Abdominal computed tomography showing (A) location of abnormal intraperitoneal free air (arrows), and (B) homogenous soft tissue in the left abdomen (arrows).

>10 per 50 high-power fields. The tumor was positive for CD117. The intra-abdominal mass was pathologically diagnosed as a GIST originating from the gastrointestinal tract. The patient recovered well and was discharged in a stable condition for follow-up with the general surgeon. There were no postoperative complications.

Clinically, peritonitis caused by ileal GIST rupture is uncommon, and these malignancies are often large ulcerating tumors, which cause gastrointestinal bleeding⁷. GISTs are relatively rare and often present with vague symptoms. Diagnosis is often difficult, as presentation is variable. About 75% are diagnosed in patients older than 50 years (median, 58 years)⁸. The most common clinical presentation of GIST is gastrointestinal bleeding because of the high vascularity of the tumors, and thus, they are frequently associated with severe gastrointestinal hemorrhage requiring either embolization or emergency surgery⁹. Symptomatic GISTs can present with a spectrum of symptoms including dysphagia, a palpable mass, abdominal pain, hematemesis, and melena^{10,11}. In the series of Catena et al.¹², there was a correlation between the type of small bowel tumor and clinical emergency presentation: GIST mostly bled; carcinoids resulted in an obstruction;

and lymphomas caused a perforation. According to the literature, if tumors do rupture or perforate, the patient often presents with acute abdomen. As our case illustrates, GIST should still be suspected when acute non-traumatic hemoperitoneum is present, and the clinician should be alert for such a possibility. This is of particular importance in the elderly, because disease can present in atypical fashion in this group, and if GIST with spontaneous rupture is not recognized immediately, it can be life-threatening and result in a surgical emergency.

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